

Bay Area Watershed Network

Watershed Assessment Workshop

PARTICIPANT BIOS

MODERATOR

Eric Berntsen is a Staff Environmental Scientist in the California State Water Resources Control Board, Division of Water Quality's Watersheds, Ocean and Wetlands Section. He has over 15 years of international experience in hydrology, geomorphology, stream and floodplain management and restoration, erosion and sediment control, low impact development, and landscape design. Mr. Berntsen is a California licensed landscape contractor, an instructor for the Riverfriendly Landscaping Green Gardener Program, Past Chair of the Certified Professional in Stormwater Quality (CPSWQ) program and serves on the board of directors of the Sacramento Area Creeks Council. Prior to joining the Water Board, he worked for the El Dorado County and Georgetown Divide Resource Conservation Districts, Jones & Stokes, and Earth Tech, Inc. Mr. Berntsen holds a B.A. in environmental studies/geology from the University of Pennsylvania, an M.S. in water resources from the State University of New York, College of Environmental Science and Forestry and is pursuing a Ph.D. in geography from the University of Science, Malaysia.

SPEAKERS

Derek Booth (PhD, PG, PE) has studied geomorphology, hydrology, and watershed management for the past 30 years, first with the US Geological Survey and then with King County Public Works (Washington state), as a university professor at the University of Washington and UC Santa Barbara, and in private practice with Stillwater Sciences and Carndo/Entrix. His work emphasizes field-based collection and analysis of hillslope and instream data in order to understand watershed processes, evaluation of altered fluvial conditions and processes, and assessment of their likely (or actual) responses to human disturbance. His publications include over 40 peer-reviewed articles, 26 USGS-published geologic maps, and more than a dozen book chapters. Presently, he is an Adjunct Professor at the Bren School of Environmental Science and Management at UCSB and the Senior Editor of the international scientific journal Quaternary Research.

Jon Kusler is the Associate Director of the Association of State Wetland Managers. He is a lawyer, writer, and educator with more than 35 years of experience with wetlands, floodplains, and riparian areas. In addition to a law degree, he holds a M.S. in Water Resources Management and an interdisciplinary Ph.D. in Land and Water Management from the University of Wisconsin. He has served on the staff of the University of Wisconsin and Massachusetts. He served as a consultant to the U.S. Water Resources Council and other federal agencies for many years. He was an Institute Fellow with the Environmental Law Institute from 1976-1978. He helped found the Association of State Wetland Managers in 1983 and served as its Executive Director from 1990 to 2001. He received EPA's National Wetland Lifetime Achievement Award in 1990, the Gilbert White award in floodplain management in 1979, and the Society of Wetland Scientist's Lifetime Achievement Award in 2009. He has authored many books and reports concerning wetlands and floodplains such as *Our National Wetland Heritage: A Protection Guide, Regulating Sensitive Lands, and Wetland Creation and Restoration: The Status of the Science* (co-editor with Mary Kentula). He lives in an old farmhouse in Berne, New York with his wife Pat, two children (when they are home), many cats, a lizard and a turtle.

Tom Griggs obtained his B.S. in Biology from California Polytechnic University, Pomona, and his M.S. in Botany from C.S.U. Chico, and his PhD. from U.C. Davis, focusing on ecology. Dr. Griggs continues to lecture on restoration ecology at symposiums and universities and authors multiple ecological journal articles. Dr. Griggs has over 25 years of experience in riparian restoration. His pioneering efforts in restoration ecology have contributed to the success of numerous projects throughout California. As a Senior Restoration Ecologist with River Partners since 2002, he supervises and develops intricate flood tested plant designs based upon collaboration with CA Department of Water Resources engineers and modelers. His work includes innovative understory techniques and wildlife friendly riparian forest, grassland, and oak woodland. He has developed cost effective installation methods for restoration plans and designs. Dr. Griggs is affiliated with California Botanical Society, California Native Plant Society, Society for Ecological Restoration, California Native Grass Association (Board member 1992 & 1993), California Invasive Plant Council, and is a member of the Advisory Board, Dept. of Biological Sciences, CSU, Chico.

Peter Moyle has been working on the ecology California's freshwater fishes since 1969, culminating in *Inland Fishes of California* (UC Press 2002). He has co-authored numerous scientific papers on the biology, status and trends of California's diverse inland fishes. There is a direct correlation between the number of his publications over the years and the number of native fish species in severe decline. Much of his research has been on the ecology of stream fishes in northern California, as well as on fishes of the San Francisco Estuary. He is involved in four long-term (20-32+ yrs) fish monitoring/research programs (Putah Creek, Sagehen Creek, Martis Creek, Suisun Marsh). Recently, his laboratory group has been conducting state-wide assessments of fish status and is using a new methodology to predict impacts of climate change on native and alien fish species. He is a co-author of a book published in 2011 by the Public Policy Institute of California, *Managing California's Water: from Conflict to Reconciliation* and is lead author/editor of a forthcoming book on Suisun Marsh (UC Press). He is a professor in the Department of Wildlife Fish and Conservation Biology and associate director of the Center for Watershed Sciences, UC Davis.

Anitra Pawley is the Program Manager of Floodsafe Environmental Stewardship and Statewide Resource Office (FESSRO), at the California Department of Water Resources. She received her Ph.D. from the University of California, Davis in Aquatic Ecology. She began her scientific career at DWR assessing Delta water quality and plankton and is now working in the same watershed on large scale Delta restoration projects. She also designed and developed the first comprehensive tracking tool for California restoration and mitigation projects (California Watershed Projects Inventory, now the Natural Resource Projects Inventory (NRPI)) through a collaborative effort with the Biodiversity Council. While working with the CALFED Bay Delta Authority and the Bay Institute, she led and/or worked with various teams to develop indicator reporting frameworks. With a small scientific team, she developed the San Francisco Bay Index (Scorecard) at the Bay Institute in 2003, the first set of comprehensive indicators to assess San Francisco estuarine health and an important foundation for later indicator efforts. She developed the Coastal Assessment for the Point Reyes and Golden Gate Parks (SeaGrant, U.C. Davis) and worked on the Sacramento Watershed Indicators Project while working with Stillwater Sciences. She is currently developing Delta restoration project tracking and monitoring tools at FESSRO.

Eric Stein is a principal scientist at the Southern California Coastal Water Research Project (SCCWRP), where he is head of the Biology Department. Dr. Stein oversees a variety of projects related to in-stream and coastal water quality, bioassessment, hydromodification, watershed modeling, and assessment of wetlands and other aquatic resources. His research focuses on effects of human activities on the condition of aquatic ecosystems, and on developing tools to better assess and manage those effects. Prior to joining SCCWRP in 2002, Dr. Stein spent six years as a Senior Project Manager with the Regulatory Branch of the Los Angeles District Corps of Engineers, and four years with a private consulting firm.

Guy Ziv is leading NatCap's work with the EPA and Department of Defense. He is a physicist experienced in modeling natural and artificial complex systems. His past projects include analyzing trade-offs between hydropower dams construction and fish biodiversity and productivity in the Mekong River Basin, and quantifying bird communities resilience to agricultural intensification in Costa-Rica. His research interest is the interplay between policy, land management decisions and land use change impacts on Environmental Services. He holds a Ph.D. in Physics from the Weizmann Institute of Science, and was a Research Associate at Princeton University before joining the Natural Capital Project.

PANEL DISCUSSION: WATERSHED ASSESSMENTS IN THE BAY AREA

MODERATOR

Larry Kolb, PE, PhD, is a civil engineer with a career focus on water. He has been active in California water issues for 40 years, 33 of those years on the staff of the San Francisco Bay Regional Water Quality Control Board in Oakland. Larry retired as Assistant Executive Officer of the Board in 2006. He has had a long interest in watersheds - how they function, how we can protect and restore them, and how we can tell if our efforts are working.

PANELISTS

Gordon Becker is Senior Scientist at CEMAR, where he researches salmonid distribution and habitat and analyzes restoration opportunities. Gordon and his co-authors prepared reports describing the status of steelhead in streams tributary to the San Francisco Bay, in the Eel River watershed, and in the basins south of the Golden Gate. These efforts were followed by restoration prioritizations based on available habitat. Gordon managed conceptual design studies to modify seven passage barriers on Bay Area creeks. Most recently, Gordon and his colleagues are developing conservation and storage projects that enhance dry season streamflow in coastal California watersheds. In spring of 2013, Gordon's teams operated outmigrant traps in the Sonoma and Pescadero creeks watersheds. Gordon studied fisheries science at CalState East Bay, and holds a master's degree in water resources management from the University of Wisconsin-Madison and a bachelor's from Williams College in Geology and Environmental Studies.

Josh Collins is the Lead Scientist at SFEI. He oversees the development and integration of SFEI's scientific work. Dr. Collins is a landscape ecologist and regional ecological planner with special expertise in mapping and assessing stream and wetland ecosystems. He received his Doctorate in Entomological Sciences at the University of California at Berkeley and did post-doctoral work in Geography and Ecology at the UC Berkeley and UC Davis. As an ecologist in the public utilities industry, Dr. Collins assessed the impacts of power plants on marine, estuarine, and riverine ecosystems. As a consulting ecologist in private practice, he designed stream and wetland restoration projects and developed methods to assess their performance. Since joining SFEI, Dr. Collins has initiated continuing programs in wetland science, watershed science, historical ecology, and regional GIS. He is a leader for a variety of efforts in the West to set long range ecological goals and he has been instrumental in the development of wetland and stream monitoring and assessment methods for California and the nation. Among his many current advisory roles, Dr. Collins chairs the technical team supporting California's new wetland and riparian area protection policy.

Joshua Fuller works for NOAA's National Marine Fisheries Service in the Protected Resources Division, Santa Rosa, California. Josh's current duties with NMFS include Section 7 consultations under the Federal Endangered Species Act and Recovery Planning for ESA-listed salmonids throughout Central Coastal California. Since joining NMFS in 2008, Josh has worked on various projects ranging from large scale water operation and passage projects to estuarine management issues. Josh is currently working with stakeholders in Alameda Creek in developing a watershed wide monitoring program as planning efforts continue towards restoring steelhead back to that watershed. Josh has gained a wide perspective of anadromous salmonids and their habitats through his angling pursuits as a past professional fly-fishing guide in Alaska and his academic research through Humboldt State University. Josh has a Master's degree in Fisheries Biology from Humboldt State University where he studied juvenile steelhead in the Russian River estuary.

Gretchen Hayes, MLA EP, brings 25 years of experience in resource planning and field geomorphology to her work in river restoration and watershed project management. She holds degrees in Geography and Environmental Planning from UC Berkeley, as well as a certification in Interpretive Studies from CSU East Bay. Prior to establishing Tessera Sciences in 2000, she worked as an exhibits design researcher at the Smithsonian Museum of Natural History; as a cultural resource preservation planner at the National Park Service Headquarters in Washington DC; and as a water resource specialist with various Bay Area firms. She is currently the landowner liaison and project coordinator for the Napa River Rutherford Reach Restoration Project, which is serving as a model for large scale river restoration via a private-public partnership of diverse stakeholders. In addition to project management, Gretchen performs geomorphic fieldwork and monitoring to inform watershed resource planning, water quality permitting, and river restoration. Gretchen especially enjoys conducting youth outreach programs to foster environmental awareness and a new generation of stewardship.

Roger Leventhal is a flood control engineer in the watershed group of the Marin County Flood Control Agency. He worked as an independent restoration engineering consultant for many years designing and constructing creek and wetland restoration projects around SF Bay before coming to Marin County Public Works in 2011. He finds Marin a great place to be a flood control engineer as the watersheds flood from both the top and from the bottom with plenty of good coffee shops nearby.

Mike Liquori is a consulting hydro-geomorphologist and watershed ecologist with over 20 years of experience in natural resource management. He has evaluated cumulative watershed effects on over 15 formal Watershed Analysis projects and was a co-investigator on a meta-analysis of 88 watershed analyses using the Washington State protocols. Mike was involved in one of the first pilot studies using the US Forest Service Watershed Analysis procedures, and was actively involved in the Washington State Watershed Analysis program. Mike was also key author for the Pilarcitos Watershed Assessment. He helped lead the implementation of the \$17.5 Million Forests & Fish Adaptive Management program. He is currently active in a number of creek restoration design projects, water rights transfer programs, hydrologic monitoring and sustainable forestry projects.

Laurel Marcus is the Executive Director of the nonprofit organization, the California Land Stewardship Institute. She has over 30 years of experience in watershed, river and wetland restoration work in California. Ms. Marcus is the author of the Fish Friendly Farming Environmental (FFF) Environmental Certification Program (also known as the Napa Green Land Certification) that she directs in seven counties for over 15 different crops and grazing land. This program focuses on collaboration with private property owners and using incentives for recovery of listed salmonid species and water quality improvements. As of September 2012 over 100,000 acres of irrigated lands were in the FFF program. Laurel is a native of the Santa Clara Valley.

Fraser Shilling is a scientist in the UC Davis Department of Environmental Science and Policy. Fraser Shilling received his PhD from the University of Southern California in aquatic ecology in 1991. He has investigated and published approaches for analyzing various types of watershed and landscape disturbances – from mercury contamination to road effects. He uses geographic information systems and modeling to assess risk and conditions at watershed, county, and bioregional scales to address regulatory and other needs and issues. He has developed indicator systems in the Sierra Nevada, Southern California, Sacramento Valley, and the Bay Area. He is currently developing the Water Sustainability Indicator Framework for the California Water Plan.

Christina Sloop is the Science Coordinator for the San Francisco Bay Joint Venture (SFBJV), a multi-stakeholder partnership focused on the conservation, restoration and enhancement of aquatic resources throughout the San Francisco Bay Area to benefit migratory birds and other wildlife. In her current work, she focuses on developing a regionally coordinated framework for the assessment of the status and trends of wetland resources and condition, and the efficacy of the conservation delivery actions the SFBJV partners engage in. Christina is a trained wetland ecologist and conservation geneticist and earned her Ph.D. in Ecology at University of California, Davis, investigating the population genetics and dynamics of spread of a hybrid swarm of cordgrasses (*Spartina* sp.) in San Francisco Bay. She also holds a Masters degree in Conservation Biology from San Francisco State University. Her 20-year experience spans across multiple disciplines and includes research on the conservation ecology of rare and endangered vernal pool species, the population genetics and dynamics of invasive and endangered species, public-access impacts on bird diversity, restoration efficacy of riparian plantings, invasive species control, endangered species recovery, and conservation planning.

Eric Stein (see speaker bio above)